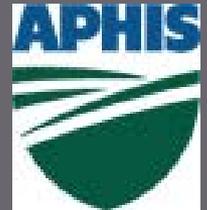


Nightmare in Fairbanks: Dealing with Bird Vetch



UAF - CES *IPM Program*



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What you should know about Bird Vetch

- Identification/ and look a-likes
- History in Alaska
- Spread in Alaska
- Impacts
- Control



Bird Vetch

Vicia cracca

- Numerous purplish blue flower clusters
- Blue-violet flowers arranged on one side of stalk
- Compound leaves composed of 8-10 narrow leaflets
- Coiling tendrils at tips of leaves
- Vine with climbing, smothering growth habit
- Square stem



Native look-a-likes

- Winged stems
- Fewer leaflets
- Fewer flowers per stalk
- Common mistakes

Beach Pea – *Lathyrus maritimus*

Marsh Pea – *Lathyrus palustris*

Photo courtesy: USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols.* Charles Scribner's Sons, New York. Vol. 2: 414.



History of vetch in Alaska

- First planted in 1909 at Rampart Experiment Station
- Typically used as green manure or pasture
- Experimentation continued till 1970's



When vetch became a weed

Spread of vetch- similar species

- Klebesadel, L. J. 1980
“Birdvetch: Forage Crop,
Ground Cover,
Ornamental or Weed?”
Agroborealis 12(1): 46-49



Image courtesy Katie Spellman

When vetch became a weed

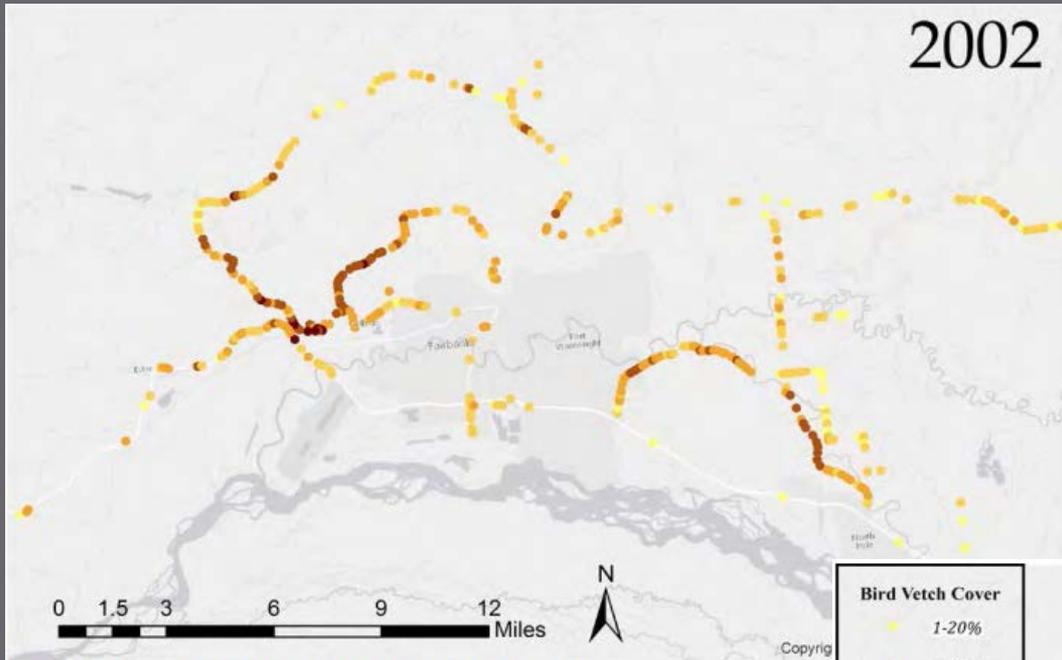
Spread of vetch- similar species

- Invasive species managers taking note in late 1990's
- 2002 Plant Materials Center Survey- present in many areas with core in Mat-Su and Fairbanks

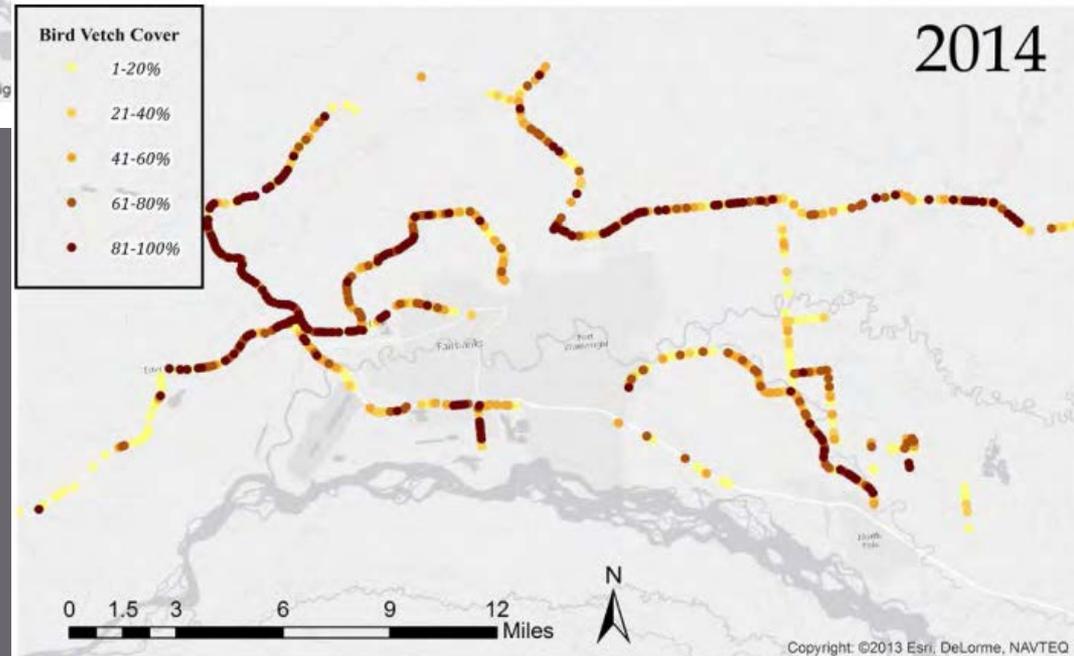


Photo courtesy Michael Rasy, UAF CES,
bugwood.org

2002 survey repeated



Map 9. Bird vetch (*Vicia cracca*) along major roads in the Fairbanks area in 2002.



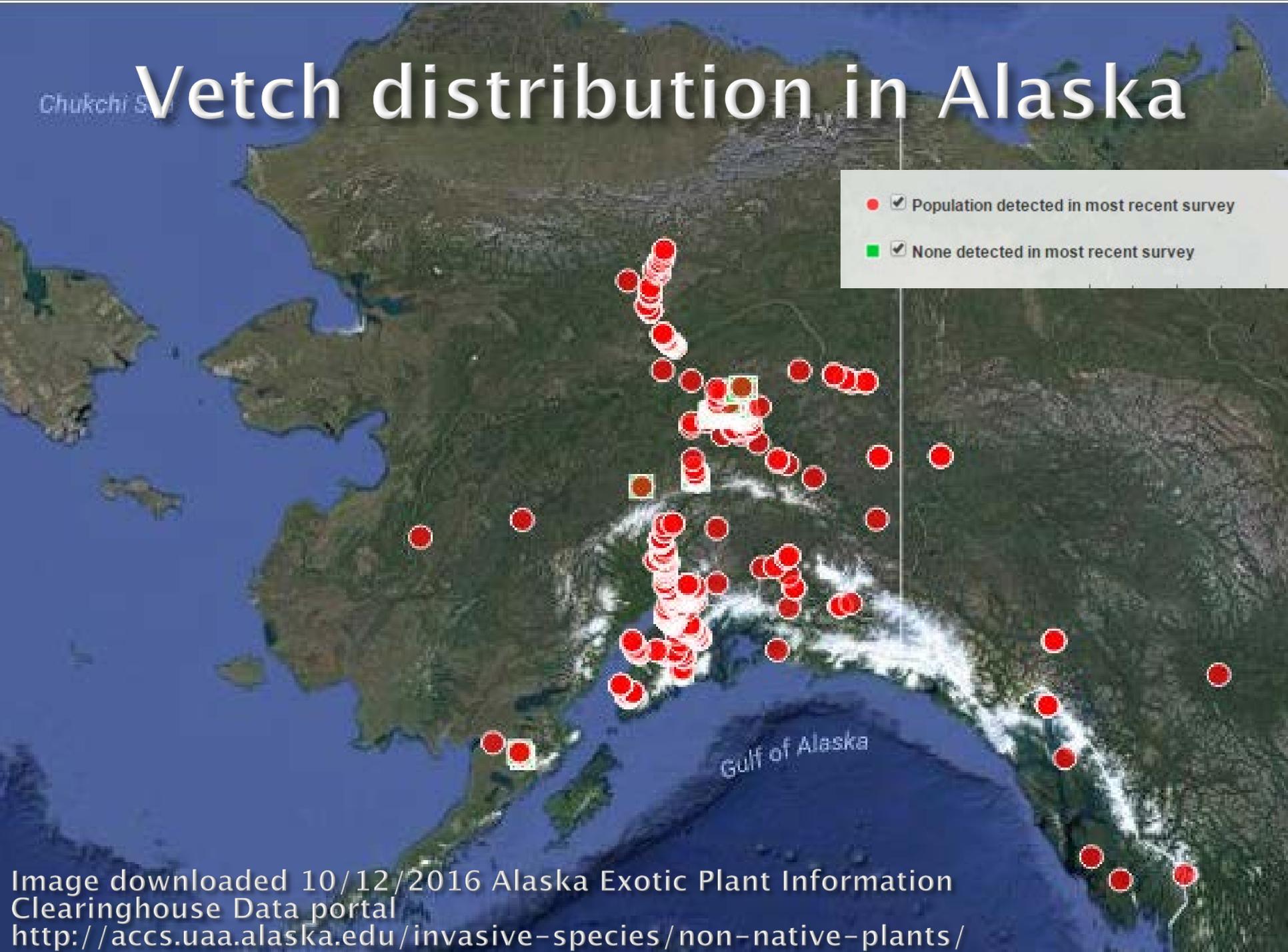
Map 10. Bird vetch (*Vicia cracca*) spread dramatically along major roads in the Fairbanks area between 2002 (top) and 2014.

Images courtesy Forest Health Conditions in Alaska 2014 pp 49

Chukchi S

Vetch distribution in Alaska

- Population detected in most recent survey
- None detected in most recent survey



Vetch distribution in the Fairbanks area

- Population detected in most recent survey
- None detected in most recent survey

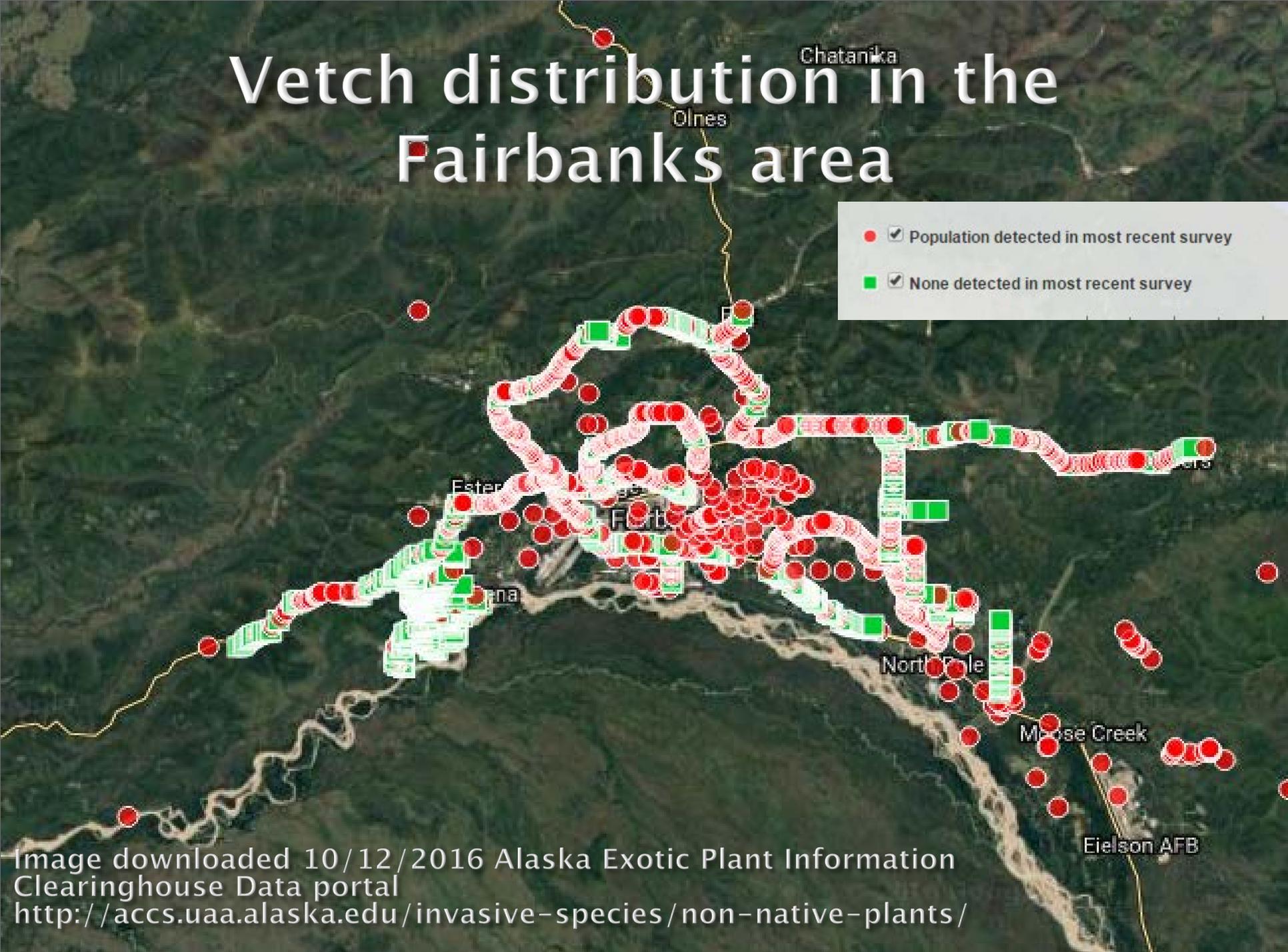


Image downloaded 10/12/2016 Alaska Exotic Plant Information Clearinghouse Data portal
<http://accs.uaa.alaska.edu/invasive-species/non-native-plants/>

Two areas of opportunity

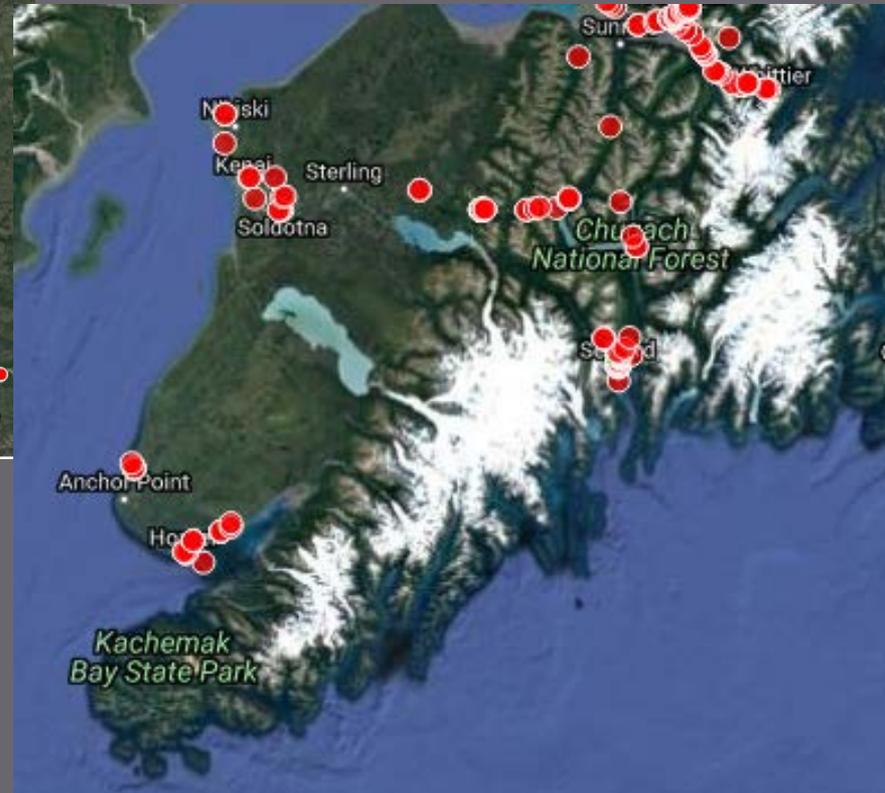
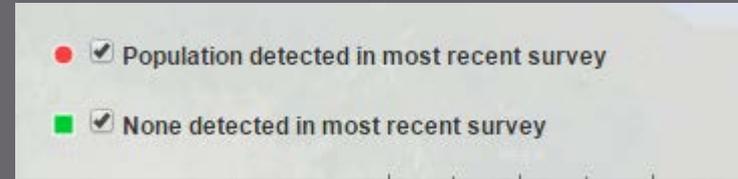


Image downloaded 10/20/2016 Alaska Exotic Plant Information Clearinghouse Data portal
<http://accs.uaa.alaska.edu/invasive-species/non-native-plants/>

Impacts observed

- When it can climb growth increases
- Climbing aspen reduces light and aspen growth by 53%
- Less difference in growth for spruce

Wagner, D. 2015 Alaska Invasive Species Conference



Vetch climbing an aspen on UAF campus

Control

- Responding early affords the best opportunity for success
- Larger/older infestations take more commitment
- Manual controls only work in limited situations
- Cooperation is essential



Image courtesy Fairbanks Soil and Water Conservation District

Manual control

- Pulling can suppress
- Possibly diminish over several years
- Will not eradicate it
- Plant stems break easily
- Roots must be removed, but this is difficult
- Must be done throughout the season



Pulling vetch is a great activity for volunteers. Photos courtesy Darcy Etcheverry, Fairbanks Soil and Water Conservation District.

Cultural/Mechanical

- Managed grasses compete well with vetch
- Vetch doesn't stand up to mowing well
- So turn the area into a regularly mowed lawn



Photo courtesy Brett Nelson Alaska
Department of Transportation

Weed barriers

- Can work on some sites
- Biggest issue is placing weed barrier around trees and shrubs
- This has not been studied
- Unknown how long barrier must be left in place
- Possibly 5 years
- Monitor and pull or spray edges



Weed barriers at Westchester Lagoon, photos courtesy Tim Stallard

Chemical control background

- Seedling vetch control studies in greenhouses trialed multiple chemicals
- Clopyralid, Triclopyr, and 2,4-D were the most effective chemicals



Greenhouse control trials of orange hawkweed photo courtesy Dr. Steven Seefeldt.

Chemical control: Field trials

- Started but not finished due to Agricultural Research Service shut down in Alaska
- Observations by Dr. Steve Seefeldt
 - Chemicals only effective in early spring
 - Effectiveness reduces as season progresses

Timing Your Bird Vetch Control



Early-Summer Stage



Preflower Stage



Flower Stage

Herbicides — Effective now. Treat plants as described above.

Herbicides — Less effective at this stage; consider pulling or mowing.

Herbicides — No longer effective; pull or mow.

More on chemical control

- After application do not pull plants
- You may need to manually or mechanically treat plants later in the season
- Always read and follow the label instructions
- Ensure chemical does not contact other susceptible plants
- Use liquid versions of chemicals to aid in application to only vetch

Photo courtesy Katie Spellman, UAF



Which chemical should you use

- Consider
 - Site; commercial, residential, agricultural, forested
 - What is the vetch growing around or on
 - What is your tolerance for damage
- Each chemical has it's pros and cons

Photo courtesy Katie Spellman, UAF



Clopyralid

- Works well
- Only allowed in non-residential sites
- Commercial landscapes are approved with at least one product
- Consideration for soil persistence
- Not as likely to damage trees and shrubs.

Clopyralid Label ex. Lontrel



Specific Use Restrictions:

- **Do not use** on residential turfgrass. Turfgrass and lawn uses are restricted to non-residential sites.
 - **Do not** send grass clippings to a compost facility.
 - **Do not** collect grass clippings for mulch or compost.
 - Applicator must give notice to landowners/property managers to not use grass clippings for composting.
 - In the states of **California, Oregon** and **Washington**, turfgrass and lawn uses are restricted to golf courses only.
-
- To avoid plant injury, do not apply to exposed roots of shallow rooted trees and shrubs such as legumes (pod bearing plants such as acacia, locust, mimosa, redbud, or mesquite) or littleleaf linden (*Tilia cordata* and other *Tilia* species).

Aminopyralid

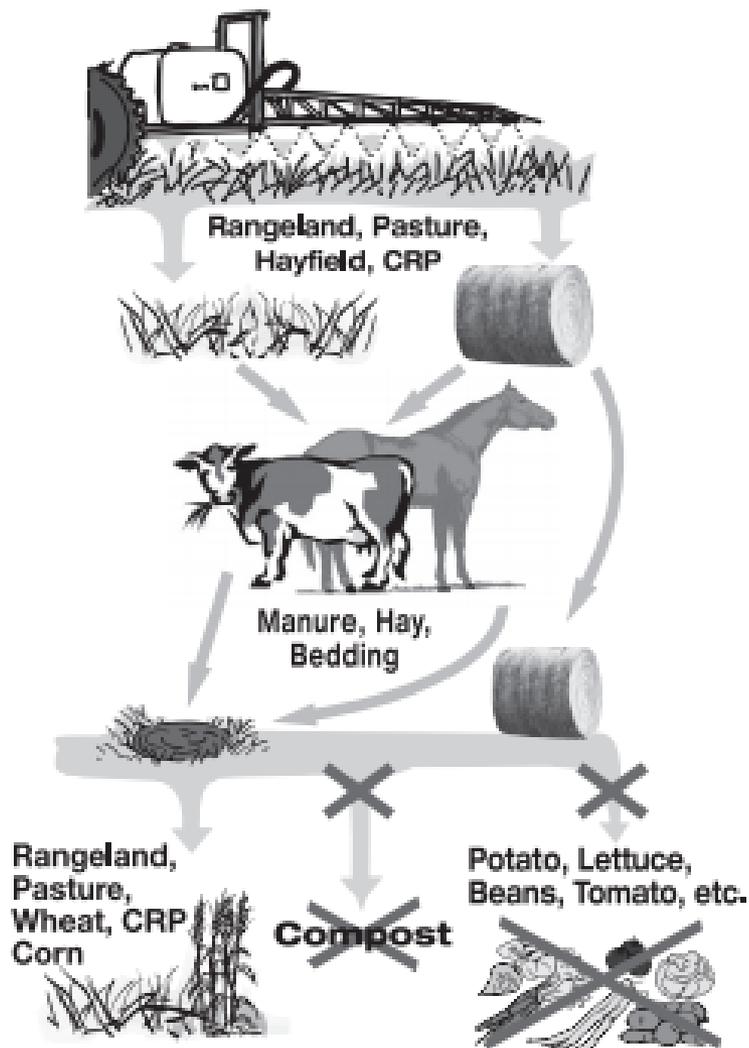
- Works well
- Only allowed in non-residential sites and not in landscapes
- Consideration for soil persistence
- Can damage some trees and shrubs through soil contact
- Expensive

Aminopyralid Label ex. Milestone

IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section "*Restrictions in Hay or Manure Use .*"
- It is mandatory to follow the "*Use Precautions and Restrictions*" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions". Call [1-(800) 263-1196] Customer Information Group.

Forage and Manure Management



Triclopyr

- Works well
- Some products labelled for use on residential landscapes
- Little soil persistence
- Likely to damage trees and shrubs

Triclopyr Label ex. Bayer Advanced Brush Killer

- This product will kill or injure all woody plants contacted. Certain warm season grasses may experience temporary yellowing when sprayed to excess.
- If a desirable plant (other than grass) is accidentally sprayed, immediately rinse with plenty of water.
- Apply when wind is calm.
- Keep people and pets off treated areas until spray has dried.
- Do not apply to or around fruits or vegetables used for food.
- Measuring utensils such as measuring cups or measuring spoons should not be used for any food or drinking water purposes after use with this product.

TIPS

- Use a sheet of cardboard or plastic to protect desirable plants from accidental contact with the product.
- **To Kill Vines,**
For vines growing on desirable plants, cut the vine and treat as directed for stump removal.



2,4-D

- Has limited control
- Can use it in most types of sites
- Soil persistence is not an issue
- Not likely to damage trees and shrubs if carefully applied
- Many products available and generally easy to use

REVIEW

Timing Your Bird Vetch Control



Early-Summer Stage

Pull/Mow — Pulling is effective on seedlings.

Cover — Apply weed barrier to entire infested area or wait if total area is unknown.

Herbicides — **Effective now.** Treat plants as described above.



Preflower Stage

Pull/Mow — Mow as close to the ground as possible.

Cover — Mow or pull; then apply weed barrier to infested area. Pull or mow edges that were previously covered.

Herbicides — **Less effective at this stage;** consider pulling or mowing.



Flower Stage

Pull/Mow — **If seed pods have matured do not mow.**

Cover — Continue monitoring and pulling edges.

Herbicides — **No longer effective;** pull or mow.

REVIEW

Herbicide	Efficacy	Risk to trees and shrubs*	Persistence in soil	Sites
Aminopyralid	Excellent	Certain species	Extremely	Forests/Farms/Right of way
Clopyralid	Excellent	Little - no	High	Many, but not residential
Triclopyr	Good-Excellent	All species if root uptake	Little	Most
2,4-D	Poor-Fair	Little-no	Little	Most

*All are a risk if contacting the leaves or needles, the chart refers to risk of uptake from roots if applied to soil, and the target plants only.



Photo courtesy Trish Wurtz USFS